

QINGGUANG ZHENG

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EDUCATION

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|---------------|--|-----------------------|
| 2023.9-2026.6 | Beijing Normal University | Beijing, China |
| | M.Ed., Psychology; GPA: 3.71/4.00 (WES) | |
| | Thesis: <i>The Impact of Spousal Interaction Themes and Patterns on Marital Quality: A Semantic and Time-Series Analysis</i> | |
| | Advisor: Dr. Xiaoyi Fang (Professor) | |
| 2019.9-2023.6 | Beijing Normal University | Beijing, China |
| | B.Sc., Psychology; GPA: 3.93/4.00 (WES) | |
| | Minor in Pedagogy | |
| | Thesis: <i>Emotional Semantic Features in Marriage Interview Text and Their Prediction of Marital Quality</i> | |
| | Advisor: Dr. Xiaoyi Fang (Professor) | |

HONORS AND AWARDS

Graduate

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| 2024 | First-Class Graduate Scholarship, Beijing Normal University (Top 15%; CNY 12,000) |
| 2024 | School-Level Excellent Teaching Assistant, Beijing Normal University (Top 10%; CNY 1,000) |
| 2024 | Second Prize (Project Title: <i>Fine-tuned BERT for Therapist-Client Interaction Encoding and Analysis</i> ; GitHub URL), MindSpore Innovation Competition (Top 20%) |
| 2023 | First-Class Graduate Freshman Scholarship, Beijing Normal University (Top 15%; CNY 12,000) |

Undergraduate

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| 2023 | Outstanding Graduate, Beijing Normal University (Top 5%) |
| 2023 | Outstanding Undergraduate Thesis, Beijing Normal University (Top 5%) |
| 2022 | Excellent Project Completion, National-Level Undergraduate Innovation and Entrepreneurship Research Project (Top 1%) |
| 2022 | Social Service Award, Beijing Normal University (5%; CNY 1,000) |
| 2021 | Second-Class Undergraduate Scholarship, Beijing Normal University (Top 30%; CNY 3,000) |
| 2021 | Excellent Project Completion, School-Level Undergraduate Innovation and Entrepreneurship Research Project (Top 5%) |
| 2020 | First-Class Undergraduate Scholarship, Beijing Normal University (Top 15%; CNY 5,000) |

PUBLICATION AND MANUSCRIPT

Under Review

1. **Zheng, Q.**, Zhang J., Li, Q., Li, K., Ma, S., & Fang, X. (under review by *Journal of Marriage and Family*). We-Talk Boosts Marital Quality across Contexts: Roles of Perceived Understanding and Dyadic Congruence.
2. Tong, W.* , **Zheng, Q.***, Li, K., Li, Q., Feng, T., & Fang, X. (under review by *Journal of Affective Disorders*). Hidden Burdens: Emotional and Behavioral Problems Among Chinese Adolescents and the Interplay of Family and Regional Socioeconomic Status.

In Preparation

1. **Zheng, Q.** (in prep, *Master's Thesis*). The Impact of Spousal Interaction Themes and Patterns on Marital Quality: A Semantic and Time-Series Analysis.
2. Wang, X.* , **Zheng, Q.***, & Fang, X. (in prep). Fertility Decline: Need Fulfillment and Marital Quality as Predictors of Fertility Intentions Among Newlyweds.
3. Ma, S., **Zheng, Q.**, Li, Q., & Fang, X. (in prep). Neural Coupling in Newlyweds: Divergent Synchronization Patterns When Discussing Marital vs. Family-of-Origin Issues.

* indicates equal contribution

CONFERENCE

1. **Zheng, Q.**, & Fang, X. (October 2023). *Emotional Semantic Features in Marriage Interview Text and Their Prediction of Marital Quality* [Poster presentation]. The 25th National Academic Conference of Psychology, Chengdu, China.
2. **Zheng, Q.**, & Fang, X. (November 2023). *Video-Based Machine-Learning Model for Couple Interaction Pattern Analysis* [Poster presentation]. The 2nd Academic Conference of the Marriage and Family Psychology and Counseling Professional Committee of the Chinese Psychological Society and the 6th International Symposium on Marriage and Family, Guangzhou, China.
3. Li, K., **Zheng, Q.**, & Fang, X. (November 2023). *Prevalence of Mental Health Problems, Levels, and Comorbidity among Chinese Children and Adolescents: A Population-based Nationwide Study* [Poster presentation]. The 2nd Academic Conference of the Marriage and Family Psychology and Counseling Professional Committee of the Chinese Psychological Society and the 6th International Symposium on Marriage and Family, Guangzhou, China.

Accepted

4. Li, K., **Zheng, Q.**, Shen, J., Liu, C., Deater-Deckard, K. *High Maternal Sensory Processing Sensitivity and Mindful Parenting: For Better or For Worse?* SRA 2026 Biennial Meeting, Toronto, Canada.

RESEARCH EXPERIENCE

Research Interests:

Relationship Science, Family Dynamics, Semantic Space, Emotion Regulation, Mental Well-Being, Social Computation, Natural Language Processing, Large Language Models in Psychology.

Research Projects

- 2022.10-Present **The Effect of Marital Interaction on Marital Relationship: Behavior and Cognitive Neurosis Mechanism**
Institute of Developmental Psychology, Beijing Normal University
A General Program from the National Natural Science Foundation of China, CNY 1,256,520 (USD 174,873)
PI: Dr. Xiaoyi Fang Role: Primary Student Researcher
- Applied NLP Methods, including LIWC, LDA topic modeling, and BERT fine-tuning to analyze 720 spousal interaction texts.
 - Engineered a few-shot prompting strategy for state-of-the-art LLMs (Gemini, Deepseek, Qwen) to automate the thematic coding of spousal interactions, boosting coding consistency from a 67% zero-shot baseline to 94%, achieving performance comparable to human annotators.
 - Applied Machine Learning, OpenFace, Whisper, and LLMs to perform multi-modal analyses (e.g., facial AU tracking, sentiment computation, sound-to-text) pipeline for spousal interaction video recordings.
 - Applied Windowed Cross Correlation, Recurrence Quantification Analysis and Detrended Fluctuation Analysis, to extract multimodal (i.e. language, facial expression, gaze) patterns and synchrony from spousal interaction time-series data.
 - Developed a semi-automatic pipeline with R (Shiny Application) and Mplus to batch-process Structural Equation Modeling, model estimates extraction, and visualization [[GitHub: SEM-Batch-Processor](#)].
- 2022.10-Present **Analyses of Chinese College Students' Mental Health Status and Revisions of College Students Mental Health Screening Scale (CSMHSS)**
Institute of Developmental Psychology, Beijing Normal University
Projects from Department of Moral Education, Ministry of Education of the People's Republic of China, CNY 800,000 (USD 111,312)
PI: Dr. Xiaoyi Fang Role: Primary Student Researcher
- Developed a fully reproducible R and Python pipeline (> 7,000 lines of code) that automates data cleaning, analyzing, modeling, visualizing, scale revising, and report generating.
 - Annually analyzed the reliability and validity of CSMHSS and its norms in R with samples of over 250,000 Chinese college students and revised the scale according to psychometric properties.
 - Annually analyzed the nation-wide mental health conditions (e.g., regional distributions, prevalence, and trends of mental health problems) in R with samples of over 5,000,000 Chinese college students.
 - Annually led a 4-member graduate student team to produce a suite of evidence-based reports, informing national status of mental health. Key deliverables included a scale validation and revision study, a data brief on emerging trends, and an advisory report on critical mental health issues.
- 2020.1-2023.12 **The Dynamic Association between Marital Interaction and Marital**

Relationship Among Newly Couple: The Mediating Role of Marital Emotion and Affection

Institute of Developmental Psychology, Beijing Normal University

A General Program from the National Natural Science Foundation of China, CNY 946,000 (USD 131,665)

PI: Dr. Xiaoyi Fang

Role: Primary Student Researcher

- Developed an automatic pipeline with R, Python, HTML, and JavaScript to analyze self-reported questionnaire data, design, and produce customized feedback reports for over 400 participated couples [[GitHub: AutoReport](#)].
- Conducted fNIRS hyperscanning experiments with over 50 couples on a NIRScout system (over 150 hours).
- Managed database of over 2,000 spousal interaction video recordings (over 1,000 hours in length and over 4TB in storage), performing quality control, comprehensive metadata tagging and batch transcoding.
- Led a 5-member team to compile a stimulus set of over 100 spousal-interaction video clips and recruited external participants for over 20,000 valence ratings for subsequent analyses.

2021.6-2022.6

Emotional Semantic Space: Individual Differences and Prediction of Emotional Well-Being

State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University

A National Undergraduate Innovation and Entrepreneurship Training Program (a highly competitive nation-wide program that grants funding to the top 4% of projects) from the Department of Higher Education, Ministry of Education of the People's Republic of China, CNY 12,000 (USD 1,670)

PI: Dr. Yanchao Bi

Role: Core Team Member

- Programmed and ran the Multiple Arrangement Task in MATLAB for 43 participants to assess the individual lexical-semantic spaces.
- Programmed Go-NoGo and word-association paradigms in PsychoPy and deployed as online experiments [[e.g. GitHub: Go-NoGo](#)].
- Applied Hierarchical Clustering and Relevance Vector Regression to predict depression and anxiety scores from semantic-space metrics in a sample of 275 participants.

2020.6-2021.6

Associations Between Individual Lexical-Semantic Spaces and Emotional Patterns, Social Values and Moral Tendencies

State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University

A School-Level Undergraduate Innovation and Entrepreneurship Training Program from the State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, CNY 7,000 (USD 974)

PI: Dr. Yanchao Bi

Role: Core Team Member

- Programmed and ran paired-similarity ratings and triplet odd-one-out tasks in MATLAB to assess participants' lexical-semantic structures.

- Implemented MouseTracker-based facial-emotion recognition tasks to capture fine-grained emotional-response patterns of participants.
- Applied Support Vector Machine and Representational Similarity Analysis to link lexical-semantic structures with behavioral indices (mouse-trajectory, social-value-orientation, and moral-judgment tendency).

TEACHING ASSISTANTSHIP

2025 Spring	Family Therapy Faculty of Psychology, Beijing Normal University	Beijing, China
	<ul style="list-style-type: none"> • Professor: Dr. Xiaoyi Fang • Graduate-level optional course; taught in Chinese 	
2023 Fall	Family Psychology Faculty of Psychology, Beijing Normal University	Beijing, China
	<ul style="list-style-type: none"> • Professor: Dr. Xiaoyi Fang • Undergraduate-level optional course; taught in Chinese • Awarded the School-Level Excellent TA at Beijing Normal University 	

PRACTICAL AND CONSULTATION EXPERIENCE

2023.9–2023.11	Mental Health Teaching Internship Beijing No. 35 Middle School	Beijing, China
	<ul style="list-style-type: none"> • Lectured psychology lessons and organized after-school activities for the psychology club. • Assisted homeroom teacher's duties, e.g., taking attendance, monitoring student behavior, and providing academic and emotional support. • Awarded a commendation letter from Beijing No. 35 Middle School. 	
2021.9–Present	Group Supervision The Center for Marriage and Family Research and Therapy, Beijing Normal University	Beijing, China
	<ul style="list-style-type: none"> • Supervisor: Dr. Xiaoyi Fang • 8 times per semester; over 200 hours in total 	

PROFICIENCY

- **Programming:** Python, R, Mplus, MATLAB, SPSS, JavaScript, C, C# (novice), n8n (novice)
- **Natural Language Processing:** Linguistic Inquiry and Word Count (LIWC), Latent Dirichlet Allocation (LDA) topic modeling, BERT fine-tuning, LLMs few-shot prompting
- **Machine-Learning Algorithms:** Support Vector Machine (SVM), Random Forest, k-Nearest-Neighbors (k-NN), k-Means, Hierarchical Clustering
- **Deep-Learning Frameworks:** PyTorch, Mindspore, Tensorflow
- **Behavior Experimental Paradigm:** PsychoPy, jsPsych, Psychtoolbox
- **Longitudinal Data Modeling:** Structural Equation Models, Generalized Linear Models, Mixed Effects Models
- **Neuroimaging Studies:** fNIRS (NIRScout data acquisition), fMRI (MATLAB/REST)
- **Multimodal Data Processing:** OpenFace (facial AU tracking), Whisper (speech-to-text)
- **Languages:** Mandarin Chinese (native), English (TOEFL 106; R28, L30, S24, W24)